UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/618,985 | 07/14/2003 | Tit Shing Wong | JETTA-003US | 5973 |

7590 04/18/2005

Kevin J. McGough
714 Colorado Avenue
Bridgeport, CT 06605

| EXAMINER | |
|---|---|
| BECK, DAVID THOMAS | |
| **ART UNIT** | **PAPER NUMBER** |
| 1732 | |

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/618,985 | WONG, TIT SHING | |
| | Examiner | Art Unit | |
| | David T. Beck | 1732 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *14 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/1/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Specification*

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Objections*

2. Claim 32 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim does not rely on other claims in the alternative. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

### *Claim Rejections - 35 USC § 112*

3. Claims 2 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 2 and 25 state that " the parison injection station pressure is from about 200 psi to about 1000 psi" but it is unclear what at the parison injection station is at this pressure. For the purpose of examination, the examiner assumes the thermoplastic elastomer is injected at this pressure.

4. Claims 5 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 5 and 28 state that "a vacuum is drawn upon the first mold cavity for a few seconds". The term "a few" is indefinite.

5. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 9 states that "a vacuum is drawn on, and compressed

gas is injected into, the second mold relatively simultaneously." Simultaneously means "at the same time". The term "relatively" renders the claim indefinite.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 6-9, 12, 13, 24, 29-31, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valyi (4,115,494) in view of Taluba (4,143,453).

With regard to claim 1, Valyi teaches a process for making a deformable, hollow thermoplastic article (abstract) comprising: (a) providing an injection moldable flexible thermoplastic elastomer (abstract); (b) providing a first mold (column 3, lines 20-21); the mold comprising exterior mold front and rear sections and an interior core (column 3, lines 20-21), the first mold comprising a parison injection station (column 3, lines 6-7), wherein the exterior sections of the first mold are spaced apart from the interior core to define a cavity in the shape of a substantial portion of the article (figure 1, number 11); (c) assembling the exterior mold sections of the first mold thereby forming a planar junction between the exterior mold parts (figure 1, number 11); (d) injecting the elastomer into the first mold cavity to form a parison (column 3, lines 6-8); (e) opening the exterior mold parts of the first mold and transferring the rear section of the first mold and the parison to a blow station (figure 2B, number 20); (f) providing a second mold at the blow station, the second mold comprising an exterior mold front section, the rear

section of the first mold, and an interior core, wherein the exterior sections of the second mold are spaced apart from the interior core to define a cavity in the shape of the entirety of the hollow article (column 4, lines 18-22); (g) drawing a vacuum on, and injecting compressed gas into, the second mold, thereby dispersing the parison relatively evenly, and with a substantially uniform thickness, against the second mold cavity interior surface to form the hollow article (column 4, lines 32-33), the hollow article having an opening for removing the interior core (figure 2B), (h) cooling the dispersed parison, thereby causing it to set and form the hollow article segment (abstract); and (f) separating the second mold interior core from the hollow article (column 4, lines 5-57), but does not explicitly teach that the diameter of the opening is smaller than the diameter of the core to pass through the opening. Taluba teaches the diameter of the opening is smaller than the diameter of the core to pass through the opening (figure 2A, numbers 19, 21, 22a and 23a). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a blow pin/core whose diameter is larger than the diameter of the opening in the process of Valyi. The motivation to do so would have been to create a doll's head with a lip that allows the head to be applied to the corresponding body portion (Taluba, column 1, lines 37-42).

With regard to claim 6, Taluba teaches using KRATON®, which is a block styrene and butadiene copolymer (column 4, line 16).

With regard to claim 7, Taluba teaches using KRATON®, which is a block styrene and butadiene copolymer (column 4, line 16). KRATON® inherently possesses an elasticity between 250-550%.

With regard to claim 8, Valyi teaches a vacuum is drawn on the second mold through a valve pin inserted through the second mold cavity (column 9, lines 12-13), and that the pressurized gas is injected into the second mold cavity through a movable core pin (column 4, lines 32-33).

With regard to claim 9, Valyi teaches a vacuum is drawn on, and compressed gas is injected into, the second mold relatively simultaneously (column 9, lines 7-13).

With regard to claim 12, Taluba teaches the interior core of the second mold includes a hollow conduit in communication with the interior of the deformable hollow thermoplastic article-forming cavity, and a pressurized gas is blown through the conduit and into the hollow interior of the deformable hollow thermoplastic article to separate it from the second mold interior core (column 4, lines 4-10).

With regard to claim 13, Taluba teaches the second mold is designed with a pre-determined ratio of the diameter of the core relative to the diameter of the opening to allow removal of the core through the opening (figure 1B, mold has an opening with a fixed size), said pre-determined ratio being less than a maximum stretchability limit of the opening of deformable hollow thermoplastic article to be formed from the flexible thermoplastic elastomer. The finished head taught by Taluba is inherently stretched less than its maximum stretchability limit so as to maintain its shape when it is affixed atop the finished doll body.

With regard to claim 24, Valyi teaches a process for making a deformable, hollow thermoplastic article (abstract) comprising: (a) providing an injection moldable flexible thermoplastic elastomer (abstract); (b) providing a first mold (column 3, lines 20-21); the

mold comprising exterior mold front and rear sections and an interior core (column 3, lines 20-21), the first mold comprising a parison injection station (column 3, lines 6-7), wherein the exterior sections of the first mold are spaced apart from the interior core to define a cavity in the shape of a substantial portion of the article (figure 1, number 11); (c) assembling the exterior mold sections of the first mold thereby forming a planar junction between the exterior mold parts (figure 1, number 11); (d) injecting the elastomer into the first mold cavity to form a parison (column 3, lines 6-8); (e) opening the exterior mold parts of the first mold and transferring the rear section of the first mold and the parison to a blow station (figure 2B, number 20); (f) providing a second mold at the blow station, the second mold comprising an exterior mold front section, the rear section of the first mold, and an interior core, wherein the exterior sections of the second mold are spaced apart from the interior core to define a cavity in the shape of the entirety of the hollow article (column 4, lines 18-22); (g) drawing a vacuum on, and injecting compressed gas into, the second mold, thereby dispersing the parison relatively evenly, and with a substantially uniform thickness, against the second mold cavity interior surface to form the hollow article (column 4, lines 32-33), the hollow article having an opening for removing the interior core (figure 2B), (h) cooling the dispersed parison, thereby causing it to set and form the hollow article segment (abstract); and (f) separating the second mold interior core from the hollow article (column 4, lines 5-57), but does not explicitly teach that the diameter of the opening is smaller than the diameter of the core to pass through the opening or that the article is a doll's head. Taluba teaches the diameter of the opening is smaller than the diameter of

the core to pass through the opening (figure 2A, numbers 19, 21, 22a and 23a) and that the article produced is a doll's head (abstract). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a blow pin/core whose diameter is larger than the diameter of the opening in the process of Valyi. The motivation to do so would have been to create a doll's head with a lip that allows the head to be applied to the corresponding body portion (Taluba, column 1, lines 37-42).

With regard to claim 29, Taluba teaches using KRATON®, which is a block styrene and butadiene copolymer (column 4, line 16).

With regard to claim 30, Taluba teaches using KRATON®, which is a block styrene and butadiene copolymer (column 4, line 16). KRATON® inherently possesses an elasticity between 250-550%.

With regard to claim 31, Valyi teaches a vacuum is drawn on the second mold through a valve pin inserted through the second mold cavity (column 9, lines 12-13), and that the pressurized gas is injected into the second mold cavity through a movable core pin (column 4, lines 32-33).

With regard to claim 34, Taluba teaches the interior core of the second mold includes a hollow conduit in communication with the interior of the deformable hollow thermoplastic article-forming cavity, and a pressurized gas is blown through the conduit and into the hollow interior of the deformable hollow thermoplastic article to separate it from the second mold interior core (column 4, lines 4-10).

With regard to claim 35, Taluba teaches the second mold is designed with a pre-determined ratio of the diameter of the core relative to the diameter of the opening to

allow removal of the core through the opening (figure 1B, mold has an opening with a fixed size), said pre-determined ratio being less than a maximum stretchability limit of the opening of deformable hollow thermoplastic article to be formed from the flexible thermoplastic elastomer. The finished head taught by Taluba is inherently stretched less than its maximum stretchability limit so as to maintain its shape when it is affixed atop the finished doll body.

8. Claims 5, 10, 11, 14-23, 28, 33, and 36-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valyi (4,115,494) in view of Taluba (4,143,453) and Fekete et al (6,403,003).

With regard to claim 5, Valyi in view of Taluba teaches the invention of claim 1 as discussed above, but does not explicitly teach that a vacuum is drawn upon the first mold cavity for a few seconds prior to the end of the elastomer injection period. Fekete et al teaches a vacuum is drawn upon the first mold cavity for a few seconds prior to the end of the elastomer injection period. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to draw a vacuum for a few seconds prior to the end of the elastomer injection period in the process taught by Valyi in view of Taluba. The motivation to do so would have been to decrease the cycle time (Fekete et al, column 8, lines 49-58).

With regard to claim 10, Fekete et al teaches the deformable, hollow thermoplastic article is a hollow doll head with ears and a hair line, the hair line forming a substantially continuous circle extending around the top of the head and above the ears; and a mold interior core defines a cavity in the shape of the portion of the hollow

doll head below the hair line. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the mold taught by Fekete et al as the first mold in the process taught by Valyi in view of Taluba. The motivation to do so would have been to create a parison shaped more closely to the finished product (Valyi, Figure 2B) and to create a doll head where the sprue is located above the hair line to disguise it (Fekete et al, column 2, lines 31-39).

With regard to claim 11, Fekete et al teaches the interior core of the second mold includes a core ejector pin and a core sleeve surrounding the pin, and upon separation of the second mold interior core from the deformable hollow thermoplastic article the core sleeve is retained in a fixed position relative to the ejector pin and the ejector pin is forced up against the deformable hollow thermoplastic article to push the deformable hollow thermoplastic article off of the core sleeve, thereby removing the deformable hollow thermoplastic article from the ejector pin (column 6, lines 31-50). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined an ejector pin taught by Fekete et al with the process taught by Valyi in view of Taluba. The motivation to do so would have been to more easily remove the finished product from the mold.

With regard to claim 14, Taluba teaches that the thermoplastic elastomer is a S-B-S copolymer (column 4, lines 16-18). Fekete et al teaches that the pre-determined ratio is about 3, which is more than about 2 (column 8, lines 2-4). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a

core with a ratio which is more than about 2. The motivation to do so would have been to create a parison that more closely resembles the finished product.

With regard to claim 15, Fekete et al teaches placing a removable object onto the surface of the interior core of the second mold; assembling the exterior parts of the second mold around the core and removable object; and overmolding the removable object with the thermoplastic elastomer when the parison is dispersed within the second mold cavity interior surface, such that the removable object is retained in the deformable hollow thermoplastic article when the interior core is removed (column 4, lines 38-53).

With regard to claim 16, Fekete et al teaches the thermoplastic elastomer overmolds only a portion of the removable object such that the removable object protrudes through the exterior surface of the deformable hollow thermoplastic article (column 4, lines 38-53).

With regard to claim 17, Fekete et al teaches the removable object is a doll eye and the deformable hollow thermoplastic article is a doll head (column 4, lines 38-53).

With regard to claim 18, Fekete et al teaches placing at least one portion of an exterior part of the first mold in contact with the interior core to define at least one opening to be formed in the deformable hollow thermoplastic article (column 4, lines 32-37).

With regard to claim 19, Fekete et al teaches placing an article into at least one of said openings formed by the contact between the exterior mold part and interior core after the deformable hollow thermoplastic article is removed from the second mold interior core (column 4, lines 32-37).

With regard to claim 20, Fekete et al teaches removing the head from the second mold interior core, wherein the second mold interior core comprises at least two separable sections, and the hollow doll head is removed from the second mold interior core by separately and individually removing each separable core section from the head through the opening (column 5, lines 1-8).

With regard to claim 21, Fekete et al teaches least one of the interior core separable sections of the second mold is a key section that must be removed first to allow other separable sections to be later removed (column 5, lines 9-20).

With regard to claim 22, Fekete et al teaches that after the interior core separable sections of the second mold are removed from the deformable hollow thermoplastic article, the sections are reassembled and replaced in the exterior of the second mold for forming another deformable hollow thermoplastic article (column 5, lines 1-8).

With regard to claim 23, Fekete et al teaches rooting hair-material to the top of the doll head above and below the part line with a sufficient density such that the part line is not observable to an ordinary observer holding the doll at arms length (column 6, lines 51-61).

With regard to claim 28, Valyi in view of Taluba teaches the invention of claim 1 as discussed above, but does not explicitly teach that a vacuum is drawn upon the first mold cavity for a few seconds prior to the end of the elastomer injection period. Fekete et al teaches a vacuum is drawn upon the first mold cavity for a few seconds prior to the end of the elastomer injection period. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to draw a vacuum for a few seconds prior

to the end of the elastomer injection period in the process taught by Valyi in view of Taluba. The motivation to do so would have been to decrease the cycle time (Fekete et al, column 8, lines 49-58).

With regard to claim 33, Fekete et al teaches the interior core of the second mold includes a core ejector pin and a core sleeve surrounding the pin, and upon separation of the second mold interior core from the deformable hollow thermoplastic article the core sleeve is retained in a fixed position relative to the ejector pin and the ejector pin is forced up against the deformable hollow thermoplastic article to push the deformable hollow thermoplastic article off of the core sleeve, thereby removing the deformable hollow thermoplastic article from the ejector pin (column 6, lines 31-50). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have combined an ejector pin taught by Fekete et al with the process taught by Valyi in view of Taluba. The motivation to do so would have been to more easily remove the finished product from the mold.

With regard to claim 36, Taluba teaches that the thermoplastic elastomer is a S-B-S copolymer (column 4, lines 16-18). Fekete et al teaches that the pre-determined ratio is about 3, which is more than about 2 (column 8, lines 2-4). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a core with a ratio which is more than about 2. The motivation to do so would have been to create a parison that more closely resembles the finished product.

With regard to claim 37, Fekete et al teaches placing a removable object onto the surface of the interior core of the second mold; assembling the exterior parts of the

second mold around the core and removable object; and overmolding the removable object with the thermoplastic elastomer when the parison is dispersed within the second mold cavity interior surface, such that the removable object is retained in the deformable hollow thermoplastic article when the interior core is removed (column 4, lines 38-53).

With regard to claim 38, Fekete et al teaches the thermoplastic elastomer overmolds only a portion of the removable object such that the removable object protrudes through the exterior surface of the deformable hollow thermoplastic article (column 4, lines 38-53).

With regard to claim 39, Fekete et al teaches the removable object is a doll eye and the deformable hollow thermoplastic article is a doll head (column 4, lines 38-53).

With regard to claim 40, Fekete et al teaches placing at least one portion of an exterior part of the first mold in contact with the interior core to define at least one opening to be formed in the deformable hollow thermoplastic article (column 4, lines 32-37).

With regard to claim 41, Fekete et al teaches placing an article into at least one of said openings formed by the contact between the exterior mold part and interior core after the deformable hollow thermoplastic article is removed from the second mold interior core (column 4, lines 32-37).

With regard to claim 42, Fekete et al teaches removing the head from the second mold interior core, wherein the second mold interior core comprises at least two separable sections, and the hollow doll head is removed from the second mold interior

core by separately and individually removing each separable core section from the head through the opening (column 5, lines 1-8).

With regard to claim 43, Fekete et al teaches least one of the interior core separable sections of the second mold is a key section that must be removed first to allow other separable sections to be later removed (column 5, lines 9-20).

With regard to claim 44, Fekete et al teaches that after the interior core separable sections of the second mold are removed from the deformable hollow thermoplastic article, the sections are reassembled and replaced in the exterior of the second mold for forming another deformable hollow thermoplastic article (column 5, lines 1-8).

With regard to claim 45, Fekete et al teaches rooting hair-material to the top of the doll head above and below the part line with a sufficient density such that the part line is not observable to an ordinary observer holding the doll at arms length (column 6, lines 51-61).

9. Claims 2-4 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valyi (4,115,494) in view of Taluba (4,143,453), Fekete et al (6,403,003) Belcher (6,733,716) and Winstead (2,702,411).

With regard to claim 2, Valyi in view of Taluba teaches the limitations of claim 1 as discussed above, but does not explicitly teach that the parison injection station pressure is from about 200 psi to about 1000 psi, the second mold cavity vacuum pressure ranges from about -7 psig to about -14.5 psig, and the pressure of the compressed gas injected into the second mold ranges from about 80 psig to about 1000 psig. Fekete et al teaches injection molding where the thermoplastic is injected at a

pressure of 200 to 1000 psi (column 8, line 28). Belcher teaches blow molding where the pressure of the compressed gas injected into the mold ranges from about 100 psi to about 750 psi, which overlaps the claimed range of about 80 psig to about 1000 psig (column 6, lines 15-18). Winstead teaches a mold cavity vacuum pressure of 15 psi, which is about 14.5 psig (column 3, lines 59-63). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine these result effective variables with the process taught by Valyi in view of Taluba. The motivation to do so would have been to maintain the thermoplastic at the proper temperature and pressure to conform it to the mold. Additionally, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With regard to claim 3, Fekete et al teaches that the parison injection station temperature is from about 300 to 550 degrees C, which overlaps the claimed range of 150 degrees C to about 300 degrees C (column 8, line 31). Belcher teaches that the temperature of the compressed gas injected into the second mold ranges from about 40 to about 120 degrees F (4.4 to 48.9 degrees C), which overlaps the claimed range of about 30 degrees C to 40 degrees C. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine these result effective variables with the process taught by Valyi in view of Taluba. The motivation to do so would have been to maintain the thermoplastic at the proper temperature and pressure to conform it to the mold. Additionally, it has been held that discovering the optimum value of a result

effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With regard to claim 4, Fekete et al teaches that the elastomer is injected into the first mold cavity over a period of from about 0.2 to about 6 seconds and the cooled and dispersed parison sets within the second mold in about 5 seconds to about 90 seconds (column 8, lines 24-38). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine these result effective variables with the process taught by Valyi in view of Taluba. The motivation to do so would have been to maintain the thermoplastic at the proper temperature and pressure to conform it to the mold. Additionally, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With regard to claim 25, Valyi in view of Taluba teaches the limitations of claim 24 as discussed above, but does not explicitly teach that the parison injection station pressure is from about 200 psi to about 1000 psi, the second mold cavity vacuum pressure ranges from about -7 psig to about -14.5 psig, and the pressure of the compressed gas injected into the second mold ranges from about 80 psig to about 1000 psig. Fekete et al teaches injection molding where the thermoplastic is injected at a pressure of 200 to 1000 psi (column 8, line 28). Belcher teaches blow molding where the pressure of the compressed gas injected into the mold ranges from about 100 psi to about 750 psi, which overlaps the claimed range of about 80 psig to about 1000 psig (column 6, lines 15-18). Winstead teaches a mold cavity vacuum pressure of 15 psi,

which is about 14.5 psig (column 3, lines 59-63). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine these result effective variables with the process taught by Valyi in view of Taluba. The motivation to do so would have been to maintain the thermoplastic at the proper temperature and pressure to conform it to the mold. Additionally, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With regard to claim 26, Fekete et al teaches that the parison injection station temperature is from about 300 to 550 degrees C, which overlaps the claimed range of 150 degrees C to about 300 degrees C (column 8, line 31). Belcher teaches that the temperature of the compressed gas injected into the second mold ranges from about 40 to about 120 degrees F (4.4 to 48.9 degrees C), which overlaps the claimed range of about 30 degrees C to 40 degrees C. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine these result effective variables with the process taught by Valyi in view of Taluba. The motivation to do so would have been to maintain the thermoplastic at the proper temperature and pressure to conform it to the mold. Additionally, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With regard to claim 27, Fekete et al teaches that the elastomer is injected into the first mold cavity over a period of from about 0.2 to about 6 seconds and the cooled and dispersed parison sets within the second mold in about 5 seconds to about 90

seconds (column 8, lines 24-38). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine these result effective variables with the process taught by Valyi in view of Taluba. The motivation to do so would have been to maintain the thermoplastic at the proper temperature and pressure to conform it to the mold. Additionally, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Beck whose telephone number is 571-272-2942. The examiner can normally be reached on Monday - Friday, 8AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 517-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DTB
April 12, 2005
DTB

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER